



Rev 01/04

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application : MICHAEL VALENTINE AGREZ, ET AL.
 Application No. : 10/019,816
 Filed : March 27, 2002
 Confirmation No. : 9944
 For : METHOD OF MODULATING INTEGRIN MEDIATED CELLULAR
 ACTIVITY AND AGENTS USEFUL FOR SAME
 Examiner :
 Attorney's Docket : SW-046XX (NOW BLAKE-046XX)

TC Art Unit: 1651

 I hereby certify that this correspondence is being deposited with the
 United States Postal Service as first class mail in an envelope
 addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA
 22313-1450 on July 12, 2004.

By: Holliday C. Heine
 Holliday C. Heine, Ph.D.
 Registration No. 34,346
 Attorney for Applicant(s)

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Sir:

It is desired to cite for the record in this application the
 enclosed references listed on the attached copy of PTO Form #1449. The
 paragraph(s) marked below are applicable to this Information Disclosure
 Statement.

[] (1) Pursuant to 37 C.F.R. § 1.97(b)(1) and (2), the attached
 Information Disclosure Statement is being filed within three
 months of the filing date of the above identified national
 application or within three months of the date of entry of the
 national stage as set forth in 37 C.F.R. § 1.491 of the above
 identified application. Accordingly, applicant(s) believes that
 no fee or statement under 37 C.F.R. § 1.97(e) is required.

1651
 \$ IFU

- ☐ (2) Pursuant to 37 C.F.R. § 1.97(b)(3), applicant(s) believes the attached Information Disclosure Statement is being filed before the mailing date of a first Office action on the merits. Accordingly, applicant(s) believes that no fee or statement under 37 C.F.R. § 1.97(e) is required.
- ☐ (3) Pursuant to 37 C.F.R. § 1.97(b)(4), applicant(s) believes the attached Information Disclosure Statement is being filed before the mailing date of a first Office action after the filing of a request for continued examination under § 1.114. Accordingly, applicant(s) believes that no fee or statement under 37 C.F.R. § 1.97(e) is required.
- ☒ (4) Pursuant to 37 C.F.R. § 1.97(c), the attached Information Disclosure Statement is being filed before the mailing date of a final action or a notice of allowance and is accompanied by:
- ☐ a statement under 37 CFR § 1.97(e); or
- ☒ the fee set forth in § 1.17(p).

PETITION UNDER 37 CFR § 1.97(d)

- ☐ (5) Pursuant to 37 CFR § 1.97(d), applicant(s) hereby petitions the Commissioner to consider the attached Information Disclosure Statement which is being filed on or before payment of the issue fee. This petition is accompanied by a statement under 37 C.F.R. § 1.97(e) and the petition fee set forth in 37 C.F.R. § 1.17(p).

STATEMENT UNDER 37 C.F.R. § 1.97(e) (1)

- ☐ (6) The undersigned hereby states that each item of information contained in the attached Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

STATEMENT UNDER 37 C.F.R. § 1.97(e) (2)

- ☐ (7) The undersigned hereby states that no item of information contained in the attached Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned after making reasonable inquiry, no item of

Application No.: 10/019,816
Filed: March 27, 2002
TC Art Unit: 1651
Confirmation No.: 9944

information contained in the attached Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Where the status of the application has changed, unknown to the applicant, such that the boxes checked are no longer applicable, the Commissioner is authorized to accept this submission with any additional fees required by that change charged to Deposit Account No. 23-0804.

The filing of this Information Disclosure Statement is not a representation by the undersigned as to personal knowledge of the contents of every word or phrase of the material enclosed or that reliance on other suitably trained professionals has not been made.

If a search report of a searching agency is enclosed identifying the nature of the relevance of each document, such a designation is deemed to satisfy 37 C.F.R. § 1.98(a)(3) even if in a foreign language because the codes are the same in all languages. However, applicant(s) does not necessarily adopt the position reflected by that report.

These references were cited in a Supplemental Partial European Search Report issued in the corresponding European patent application (EP 00 94 0024) (copy enclosed); or in an Australian Patent Office Action in the corresponding Australian application.

Application No.: 10/019,816
Filed: March 27, 2002
TC Art Unit: 1651
Confirmation No.: 9944

The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 23-0804. Triplicate copies of this letter are enclosed.

Respectfully submitted,

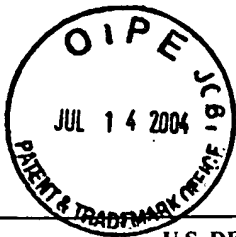
MICHAEL VALENTINE AGREZ, ET AL.

By: Holliday C. Heine
Holliday C. Heine, Ph.D.
Registration No. 34,346
Attorney for Applicant(s)

WEINGARTEN, SCHURGIN,
GAGNEBIN & LEOVICI LLP
Ten Post Office Square
Boston, Massachusetts 02109

Telephone: (617) 542-2290
Telecopier: (617) 451-0313

HCH/mc/308510-1
Enclosures



Date: July 12, 2004

Page 1 of 4

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>				ATTY. DOCKET NO. BLAKE-046XX		APPLICATION NO. 10/019,816	
				APPLICANT: Michael Valentine Agrez, et al.			
				FILING DATE March 27, 2002		TC ART UNIT 1651	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION/ ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE
		US					
		US					
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS <i>(including Author, Title, Date, Pertinent Pages, etc.)</i>							
		Agrez, M.V. et al., "The $\alpha v \beta 6$ integrin induces gelatinase B secretion in colon cancer cells," Int. J. Cancer: 81, 90-97 (1999).					
		Agrez, M., et al., "The $\alpha v \beta 6$ integrin promotes proliferation of colon carcinoma cells through a unique region of the $\beta 6$ cytoplasmic domain," J. Cell Biol. 127, No. 2, pp 547-556 (October 1994).					
		Ahmed, N. et al., "Direct integrin $\alpha v \beta 6$ -ERK binding: implications for tumour growth," Oncogene 21, pp 1370-1380 (21 February 2002).					
		Dedhar, S. et al., "Integrin cytoplasmic interactions and bidirectional transmembrane signalling," Current Opinion in Cell Biology, Current Science, London, vol. 8, no. 5, pp 657-669 (1 October 1996).					
		Erker, J.C. et al., DATABASE GENBANK 'Online!', "polyprotein GB virus c/Hepatitis C virus," Database accession no. AAC55951 (13 November 1996).					
		Fodstad, O. et al., "DATABASE GENESEQ 'Online!', "CAPL gene 5' splice site antisense oligonucleotide," Database accession no. AAT33333 (12 November 1996).					
		Hughes, P.E. et al., "Integrin affinity modulation," Trends in Cell Biology, England, vol. 8, no. 9, pp 359-364 (September 1998).					
		Kerr, J.S. et al., "Novel small molecule αv integrin antagonists: comparative anti-cancer efficacy with known angiogenesis inhibitors," Anticancer Research 19: 959-968 (1999).					
EXAMINER		DATE CONSIDERED					
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							



Date: July 12, 2004

Page 2 of 4

U.S. DEPARTMENT OF COMMERCE (REV. 05/03) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>				ATTY. DOCKET NO. BLAKE-046XX		APPLICATION NO. 10/019,816	
				APPLICANT: Michael Valentine Agrez, et al.			
				FILING DATE March 27, 2002		TC ART UNIT 1651	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION/ ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE
		US					
		US					
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS <i>(including Author, Title, Date, Pertinent Pages, etc.)</i>							
		Lub, M. et al., "Cytoplasmic tails of β_1 , β_2 , and β_7 integrins differentially regulate LFA-1 function in K562 cells," Molecular Biology of the Cell, vol. 8, no. 4, pp 719-728 (April 1997).					
		Marcantonio, E.E. et al., "Mapping of the functional determinants of the integrin β_1 cytoplasmic domain by site-directed mutagenesis," Cell Regulation, vol. 1, no. 8, pp 597-604 (July 1990).					
		Mastrangelo, A.M. et al., "Amino acid motifs required for isolated β cytoplasmic domains to regulate 'in trans' β_1 integrin conformation and function in cell attachment," J. Cell Science, vol. 112, no. 2, pp 217-229 (January 1999).					
		Meurers, B.H. et al., DATABASE GENBANK 'Online! "Myosin heavy chain 12 'Homo sapiens!'," Database accession no. CAA69036 (8 January 1997).					
		Niu, J. et al., "Integrin expression in colon cancer cells is regulated by the cytoplasmic domain of the β_6 integrin subunit," Int. J. Cancer, vol. 99, no. 4, pp 529-537 (1 June 2002).					
		Oda, K. et al., DATABASE GENBANK 'Online! "CoxII intron2 ORF 'Marchantia polymorpha!'," Database accession no. AAC09431 (2 April 1998).					
		O'Toole, T.E. et al., "Regulation of integrin affinity states through an NPXY motif in the β subunit cytoplasmic domain," J. Biol. Chem. 270, no. 15, pp 8553-8558 (14 April 1995).					
		Pardi, R. et al., "Conserved regions in the cytoplasmic domains of the leukocyte integrin $\alpha_L\beta_2$ are involved in endoplasmic reticulum retention, dimerization, and cytoskeletal association," Journal of Immunology, vol. 155, no. 3, pp 1252-1263 (1 August 1995).					
EXAMINER				DATE CONSIDERED			
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							



Date: July 12, 2004

Page 3 of 4

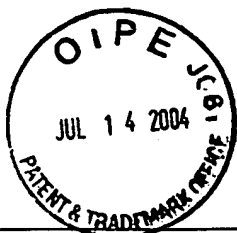
(REV. 05/03) DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	ATTY. DOCKET NO.	APPLICATION NO.
	BLAKE-046XX	10/019,816
	APPLICANT: Michael Valentine Agrez, et al.	
	FILING DATE	TC ART UNIT
	March 27, 2002	1651

U.S. PATENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION/ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE
	US					
	US					

FOREIGN PATENT DOCUMENTS						
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)	
	Patil, S. et al, "A double mutation of the NPLY motif in the integrin β_3 cytoplasmic tail abolishes post-ligand binding events of β_3 integrins," Molecular Biol. of the Cell, vol. 7, no. Suppl., p.248A (Annual Mtg. of the 6 th International Congress on Cell Biology and the 36 th American Society for C; San Francisco, California, US, December 7-11, 1996).
	Roberts, M.S. et al., "ERK1 associates with $\alpha_v\beta_3$ integrin and regulates cell spreading on vitronectin," J. Biol. Chem., vol. 278, no. 3, pp 1975-1985 (17 January 2003).
	Swanson, R. et al., DATABASE GENBANK 'Online!', "UL97 homolog 'Rhesus cytomegalovirus!'", Database accession no. AAC05259 (7 March 1998).
	Tada, M. et al., DATABASE GENBANK 'Online!', "homeobox protein BIX3 'Xenopus laevis!'", Database accession no AAC61703 (29 September 1998).
	Tahiliani, P.D. et al., "The role of conserved amino acid motifs within the integrin β_3 cytoplasmic domain in triggering focal adhesion kinase phosphorylation," J. Biol. Chem., vol. 272, no. 12, pp 7892-7898 (March 21 1997).
	Townsend, P.A. et al., " β_1 integrin antisense oligodeoxynucleotides: utility in controlling osteoclast function," Eur. J. Cell Biol., vol. 78, pp 485-496 (July 1999).
	Trikha, M. et al., "Role of $\alpha_{IIb}\beta_3$ integrin in prostate cancer metastasis," The Prostate, vol. 35, pp 185-192 (1998).

EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	



Date: July 12, 2004

Page 4 of 4

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>				ATTY. DOCKET NO. BLAKE-046XX		APPLICATION NO. 10/019,816	
				APPLICANT: Michael Valentine Agrez, et al.			
				FILING DATE March 27, 2002		TC ART UNIT 1651	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION/ ISSUE DATE	NAME	CLASS	SUBCLASS	FILING DATE
		US					
		US					
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)							
		Vignoud, L. et al., "NPXY motifs control the recruitment of the $\alpha 5 \beta 1$ integrin in focal adhesions independently of the association of talin with the $\beta 1$ chain," J. Cell Science, vol. 110, pp 1421-1430 (June 1997).					
		Weinacker, A. et al., "Role of the integrin $\alpha_v \beta_6$ in cell attachment to fibronectin, J. Biol. Chem., vol. 269, no. 9, pp 6940-6948 (March 4, 1994).					
		Zage, P.E. et al., "The membrane proximal region of the integrin β cytoplasmic domain can mediate oligomerization," Cell Adhesion and Communication, vol. 5, no. 5, pp 335-347 (1998).					
		Zhang, Z. et al., "Retroviral transfer of antisense integrin $\alpha 6$ or $\alpha 8$ sequences results in laminar redistribution or clonal cell death in developing brain," J. Neuroscience, vol. 18 (17), pp 6928-6938 (September 1, 1998).					
EXAMINER				DATE CONSIDERED			
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							